

## REPTILES

### **Red-Eared Slider *Trachemys scripta elegans***

Ecology: Red-eared sliders (*T. scripta elegans*) can be distinguished from all other North American turtles by the presence of a broad red stripe behind the eye. Some specimens, especially older males, become melanistic or black, which makes identification challenging (Dundee and Rossman 1989; Conant and Collins 1991; Tucker et al. 1995).

*T. scripta elegans* are found both in fresh and brackish waters including coastal marsh ponds (Dundee and Rossman, 1989). *T. scripta elegans* prefer quiet water with a muddy bottom and abundant vegetation, they can also be found in moving waters, though less frequently. They can often be seen basking on rocks, logs, vegetation masses, and on banks (Mount, 1975; Behler, 1979; Dundee and Rossman, 1989; Conant and Collins, 1991). *T. scripta elegans* is sensitive to cold temperatures.

Mortality rates are high among the young, though; adults are believed to live as long as 50-75 years (Dundee and Rossman 1989). Although significant differences in growth rates have been documented between populations (Tucker et al. 1998), female red-eared sliders are typically larger than males (Gibbons and Lovich 1990). Males mature when they reach a plastron length of 90-100 mm, between 2-5 years of age. Females mature at plastron lengths between 150 and 195 mm (Ernst and Barbour 1972). Courtship occurs in spring and fall, and has been reported as highly stereotyped (Dundee and Rossman 1989; Lovich et al. 1990). Nests are excavated along the banks well above water, or sometimes, considerable distances from the water (Mount, 1975). Nests are excavated to a depth of 120-140 cm (Packard et al. 1997). In Louisiana, eggs are deposited from late March to mid July. Clutch size varies from 2 to 19 eggs, but are typically between 7 and 13 eggs (Dundee and Rossman, 1989; Tucker and Janzen, 1998). Eggs are white and usually measure between 23.5 and 44.2 mm in length and 18.4 to 24.6 mm in width (Dundee and Rossman 1989). Eggs hatch in approximately 68-70 days and newborns are 20-35 mm long (Dundee and Rossman 1989). Chen and Lue (1998) reported eggs incubated under lab conditions, to hatch in 75 days. Up to three clutches may be laid per season. As is the case with other turtles, sex determination of hatchlings is temperature dependent (Lockwood et al. 1991). Most hatchlings overwinter in their nest (Mount 1975; Packard et al. 1997). Sexual maturity is reached in two to five years (Dundee and Rossman 1989).

Distribution: Because of the frequency of introductions of this subspecies, its natural range in North America is not fully known (Holman 1994). Red-eared sliders are believed to naturally occur in the Mississippi valley from northern Illinois and Indiana to the northern Gulf of Mexico, west to Texas and east to western Alabama (Holman 1994).

*T. scripta elegans* now occurs throughout Utah (Figure 1). Most sightings are likely a result of escaped or released pets. However, breeding populations have established in numerous locations (Pers. Comm. Richard Hepworth. 2008. Southern Region Assist. Aquatic Program Manager, Utah Division of Wildlife Resources; Pers. Comm. Mike Ottenbacher. 2008; Southern Region Aquatic Program Manager, Utah Division of Wildlife Resources; Pers. Comm. Craig Schaugarrd. 2008. Northern Region Aquatic Program Manager, Utah Division of Wildlife Resources). Reproducing populations in Utah are generally found in regions with warmer

climates, artificial ponds such as community fisheries, and warm springs. Packard et al. (1997) suggests that the depth to which the soil freezes in the winter might limit the northern extent of this species in Illinois. Isolated populations occurring in Michigan, suffer heavy mortalities in the winter, surviving mostly in artificial ponds (Holman, 1994).

Pathways of Introduction: *Trachemys scripta* was introduced into the wild in Europe because pet turtles were released by their owners. Red-eared sliders commonly sold in the pet trade across the United States (Dundee and Rossman, 1989). Close and Seigel (1997) reported approximately 26 million red-eared sliders were exported from the U.S. to international markets between 1988 and 1994. Concern, over the possible establishment of this species throughout the world, has been raised (Newberry, 1984; Bouskila, 1986; Da Silva and Blasco, 1995; Chen and Lue, 1998).

*T. scripta* will most likely be unsuccessful in spreading throughout Utah. Generally, it is only observed at localities where humans release individuals. Since it rarely manages to breed under outdoor, natural or semi-natural conditions (so far mainly in Southern Utah and isolated areas with specific habitat conditions in Northern Utah), *T. scripta* will only be able to increase its distribution by additional releases.

Management Considerations: Negative impacts of *Trachemys scripta* on natural habitats and ecosystems are unknown. The vast majority of individuals are observed in urban parks and other urban areas of limited ecological value. Potentially, *T. scripta* may be released in other natural habitats with high ecological value, especially close to urban areas. Should that occur, it would be relevant to monitor any possible impact to native flora and fauna, which would typically include: invertebrates, amphibians, native turtles (*E. orbicularis*) and nesting birds.

Any further efforts to reduce releases of pet turtles in the wild should include information outreach. Targeted public awareness campaigns should be aimed at informing pet owners to obtain sufficient information about the animals in advance, to care well for them and never to release them in the wild.

It is possible that individuals of *T. scripta* may be released in ponds or other freshwater bodies compromising valuable ecological systems with rare amphibians, fish, birds or plants. In such cases it may be considered necessary to eradicate the turtles. In our climate, *T. scripta* will have to bask on land regularly in order to maintain an optimal body temperature. Thus, in sunny weather turtles will be easy to spot while basking on logs, branches, rocks, banks and other suitable terrestrial places very close to the water. This behavior would aid in detection and capture.

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# Red-Eared Slider- *Trachemys scripta elegans*

 Current Distribution of Red-Eared Slider



Photo by: Trisha M Shears

